

Notice of Allowability	Application No.	Applicant(s)	
	09/683,128	TOTH ET AL.	
	Examiner	Art Unit	
	Allen C. Ho	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/17/05.
2. ☒ The allowed claim(s) is/are 1-37.
3. ☒ The drawings filed on 21 November 2001 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with J. Mark Wilkinson (Reg. No. 48,865) on 03 February 2005.

Claim 32 has been amended as follows:

32. (Currently Amended) A radiation emitting medical device comprising:
- means for receiving scan parameters;
 - means for adjusting the scan parameters automatically to generate a desired target image quality across a VOI for a patient;
 - means for modifying a radiation tube profile based on the adjusted scan parameters to account for sub-volumes of elevated interest such that radiation dose to the sub-volumes of elevated interest exceeds that of other sub-volumes of the VOI; and
 - means for scanning the patient using the modified radiation tube current profile to reconstruct an image of the patient with image quality for the sub-volumes of elevated interest exceeding that of the other sub-volumes of the VOI.

Allowable Subject Matter

2. Claims 1-37 are allowed.
3. The following is an examiner's statement of reasons for allowance:

With respect to claims 1-11, the prior art fails to teach or fairly suggest a method of processing imaging data for a radiation emitting medical imaging device comprising the steps of automatically generating a predicted noise index from the received set of scan parameter values and generating an x-ray tube current profile based at least on the predicted noise index as claimed in claim 1.

With regard to claims 12-19, the prior art fails to teach or fairly suggest a method of processing image data for a radiation emitting medical imaging device comprising the step of enabling interactive adjustment of the generated tube current profile to convey a dose specific for each sub-volume in the VOI as claimed in claim 12.

With regard to claims 20-25, the prior art fails to teach a computed tomography system comprising a computer programmed to generate a tube current profile for the high frequency electromagnetic energy projection source according to the target noise index and a predicted noise index as claimed in claim 20.

With regard to claims 26-31, the prior art fails to teach or fairly suggest a computer-readable medium having stored thereon a computer program that causes the computer to: generate a predicted noise index from the pre-scan data, and generate a tube current profile for a radiation source designed to project radiation at a subject during data acquisition based upon the predicted noise index and a target noise index as claimed in claim 26.

With regard to claims 32-37, the prior art fails to teach or fairly suggest a radiation emitting medical device comprising means for modifying a tube current profile based on the adjusted scan parameters to account for sub-volumes of elevated interest such that radiation dose

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to the sub-volumes of elevated interest exceeds that of other sub-volumes of the VOI as claimed in claim 32.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

4. Applicant's arguments filed 17 January 2005 with respect to claims 12-37 have been fully considered and are persuasive. The rejection of claims 12-37 under 35 U.S.C. 112 first paragraph has been withdrawn.

5. Applicant's arguments filed 17 January 2005 with respect to claims 12-19 and 32-37 have been fully considered and are persuasive. The rejections of claims 12-19 and 32-37 under 35 U.S.C. 102 (b) and 103 (a) have been withdrawn.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen C. Ho
Patent Examiner
Art Unit 2882

03 February 2005